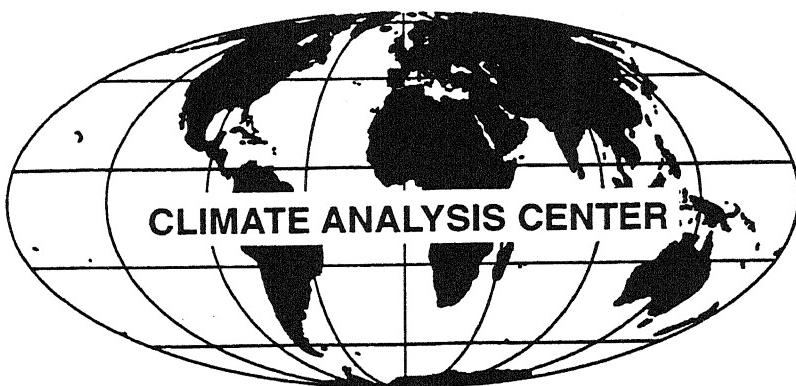


CONTAINS:

**WINTER
(DEC-FEB)
1993-1994
UNITED STATES
CLIMATE
SUMMARY**

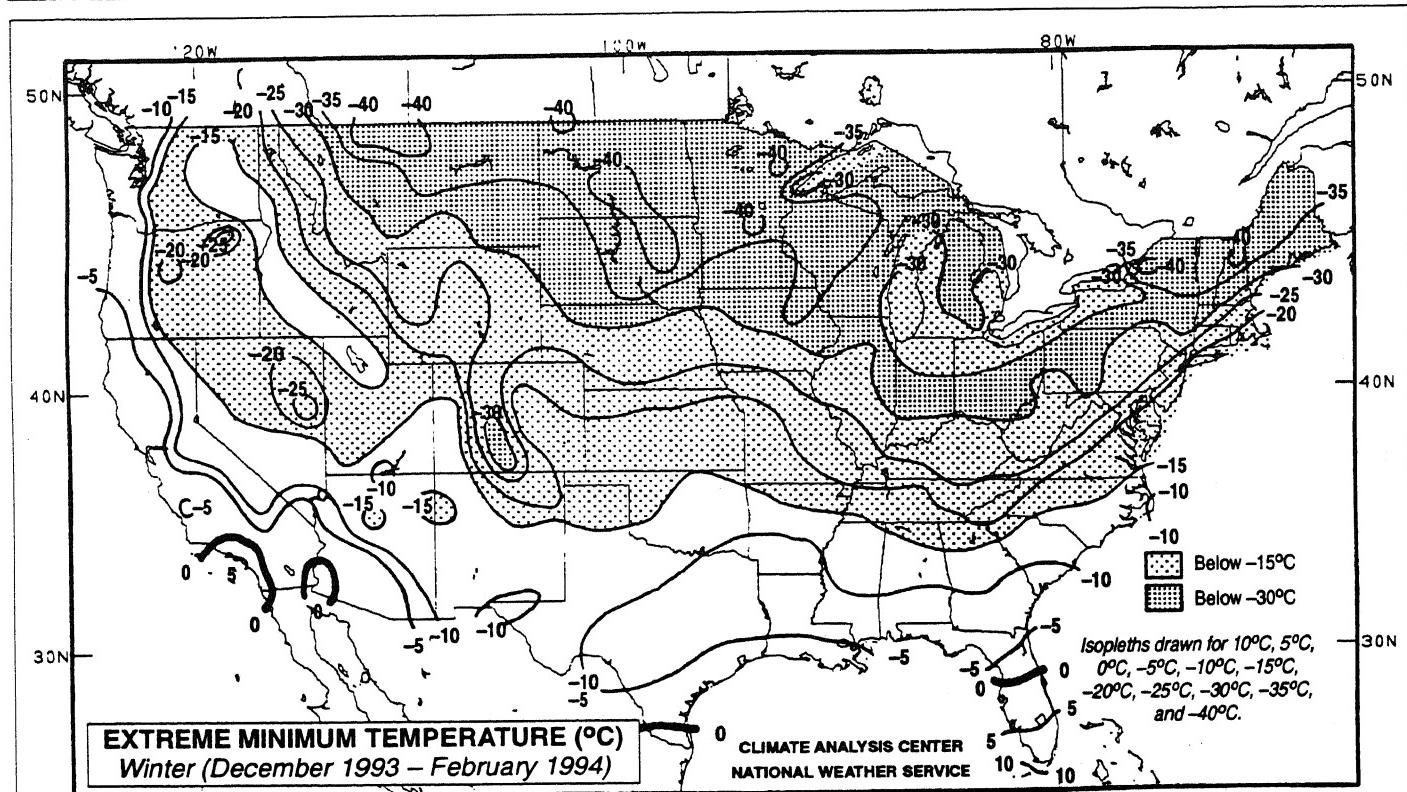


WEEKLY CLIMATE BULLETIN

No. 94/11

Washington, DC

March 16, 1994



EXCEPTIONALLY COLD AIR COVERS THE CENTRAL AND EASTERN U.S. DURING THE WINTER OF 1993 - 1994. Although spells of mild weather during the first and last few weeks of meteorological winter (December - February) elevated three-month average temperatures, some of the coldest air ever to enter the northeastern quarter of the country sent lows plunging below -40°C in parts of the Dakotas and northern New England while readings below -10°C penetrated southward into central sections of Georgia, Mississippi, and Alabama in January. About 1½ dozen new all-time record lows were established from the Great Lakes and Ohio Valley eastward across the northern mid-Atlantic during January 18 - 21, and new statewide record lows may have been set in Indiana and Michigan, where unofficial observers reported lows of -38°C and -47°C, respectively. In sharp contrast, much of the West experienced an atypically mild and dry winter, with most of California remaining above -5°C and large sections of the northern and central Intermountain West not dropping below -15°C during the three-month period. For more details on Winter conditions, refer to the Seasonal Climate Summary on pp. 7-12.



UNITED STATES DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE-NATIONAL METEOROLOGICAL CENTER
CLIMATE ANALYSIS CENTER



WEEKLY CLIMATE BULLETIN

This Bulletin is issued weekly by the Climate Analysis Center and is designed to indicate, in a brief concise format, current surface climatic conditions in the United States and around the world. The Bulletin contains:

- Highlights of major climatic events and anomalies.
- U.S. climatic conditions for the previous week.
- U.S. apparent temperatures (summer) or wind chill (winter).
- Global two-week temperature anomalies.
- Global four-week precipitation anomalies.
- Global monthly temperature and precipitation anomalies.
- Global three-month precipitation anomalies (once a month).
- Global three-month temperature anomalies (once a month).
- Global twelve-month precipitation anomalies (every three months).
- Global twelve-month temperature anomalies (every three months).
- Special climate summaries, explanations, etc. (as appropriate).

Most analyses contained in this Bulletin are based on preliminary, unchecked data received at the Climate Analysis Center via the Global Telecommunications System. Similar analyses based on final, checked data are likely to differ to some extent from those presented here.

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GLOBAL CLIMATE HIGHLIGHTS

MAJOR CLIMATIC EVENTS AND ANOMALIES AS OF MARCH 12, 1994

1. Central North America:

LD WEATHER EASES, BUT WETNESS PERSISTS.

→-season snow storm dumped 25 to 46 cm of snow on the Texas Panhandle and parts of Oklahoma, Arkansas, and Missouri. In addition, up to 10 cm of snow buried portions of the Ohio Valley, causing flight delays in Cincinnati and Columbus, according to press reports. Despite the wintry precipitation, temperatures averaged near normal for the week [COLD - 1 at 12 weeks]. Over 25 mm of precipitation fell on most of the south-central United States and Canadian Maritimes, with totals approaching 160 mm in central Tennessee. Six-week moisture surpluses reached 160 mm in southeastern Virginia [WET - 6 weeks].

2. Central South America:

ABOVE NORMAL TEMPERATURES AGGRAVATE DRYNESS.

Temperatures averaged up to 6°C above normal across much of the region, aggravating abnormally dry conditions in east-central Argentina [WARM - 6 weeks]. Most of central Argentina and central Chile received little or no precipitation as six-week moisture shortages reached 160 mm in some areas [DRY - 6 weeks].

3. Northern Scandinavia:

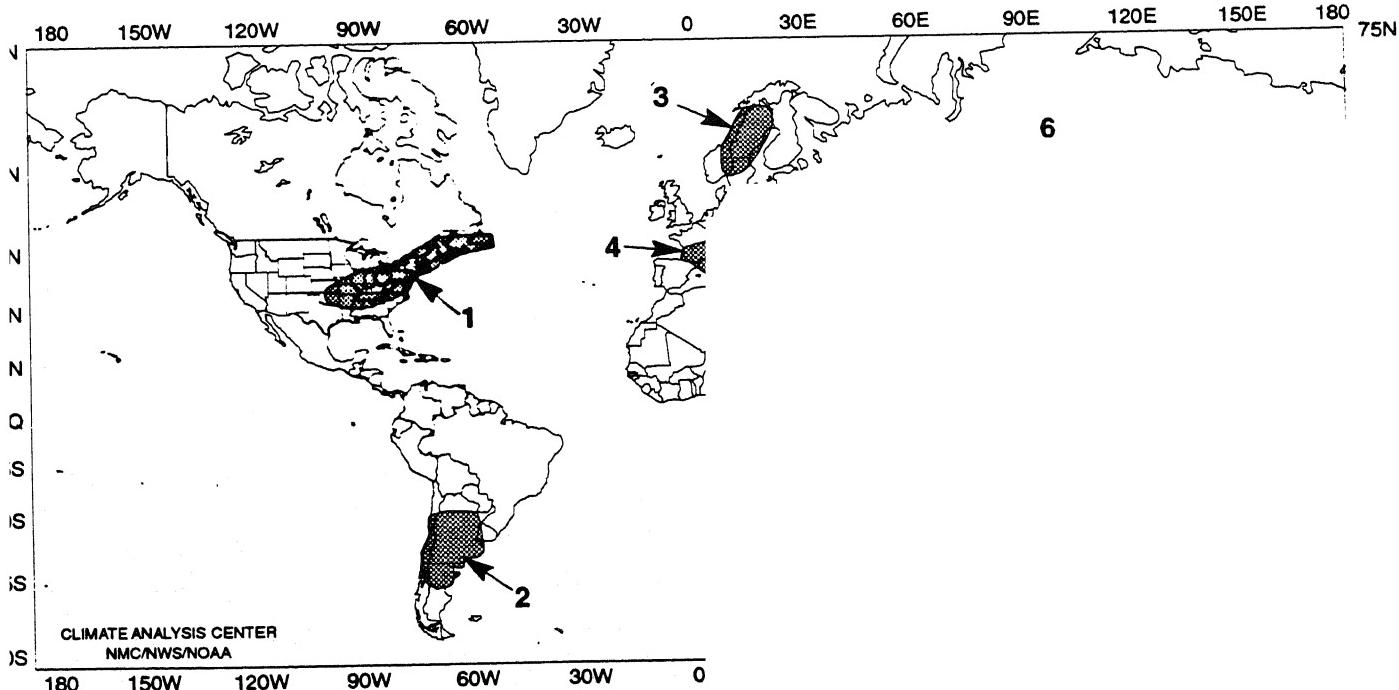
STILL VERY DRY.

→ or no precipitation fell on northern sections of Sweden and Norway, where shortfalls approached 100 mm during the past six weeks [DRY - 7 weeks].

4. Southern Europe:

WARM AND DRY WEATHER PREVAILS.

→ or no precipitation was measured across the region for the fifth consecutive week [DRY - 5 weeks]. The unusually dry conditions were exacerbated by temperatures averaging 3°C to 8°C above normal, with the largest departures reported in France and Italy [WARM - 3 weeks].



TEXT: Approximate duration of anomalies is in brackets. Precipitation
MAP: Approximate locations of major anomalies and episodic events

temperature anomalies, four week precipitation anomalies, long

5. Southeastern Africa:

PRECIPITATION SHORTFALLS INCREASE.

Less than 20 mm of rain fell on most of Zambia, Zimbabwe, and Mozambique, where six-week moisture shortages of up to 240 mm accumulated at a few locations [DRY - 6 weeks].

6. Kazakhstan:

COLD CONDITIONS DEVELOP.

Exceptionally cold weather, with weekly departures of -10°C to -14°C, covered the region. Subnormal temperatures have been reported consistently since early February, with weekly departures below -6°C common [COLD - 5 weeks].

7. Southeastern China:

MORE WET WEATHER.

Moderate rains of 40 to 70 mm dampened the region last week, with a few amounts approaching 120 mm. Since early February, moisture excesses reached as high as 90 mm at scattered locations [WET - 5 weeks].

8. Indonesia:

ENHANCED CONVECTIVE ACTIVITY CONTINUES.

Heavy thunderstorms again drenched the archipelago with up to 250 mm of rain as six-week surpluses remained as high as 370 mm at some locations [WET - 16 weeks].

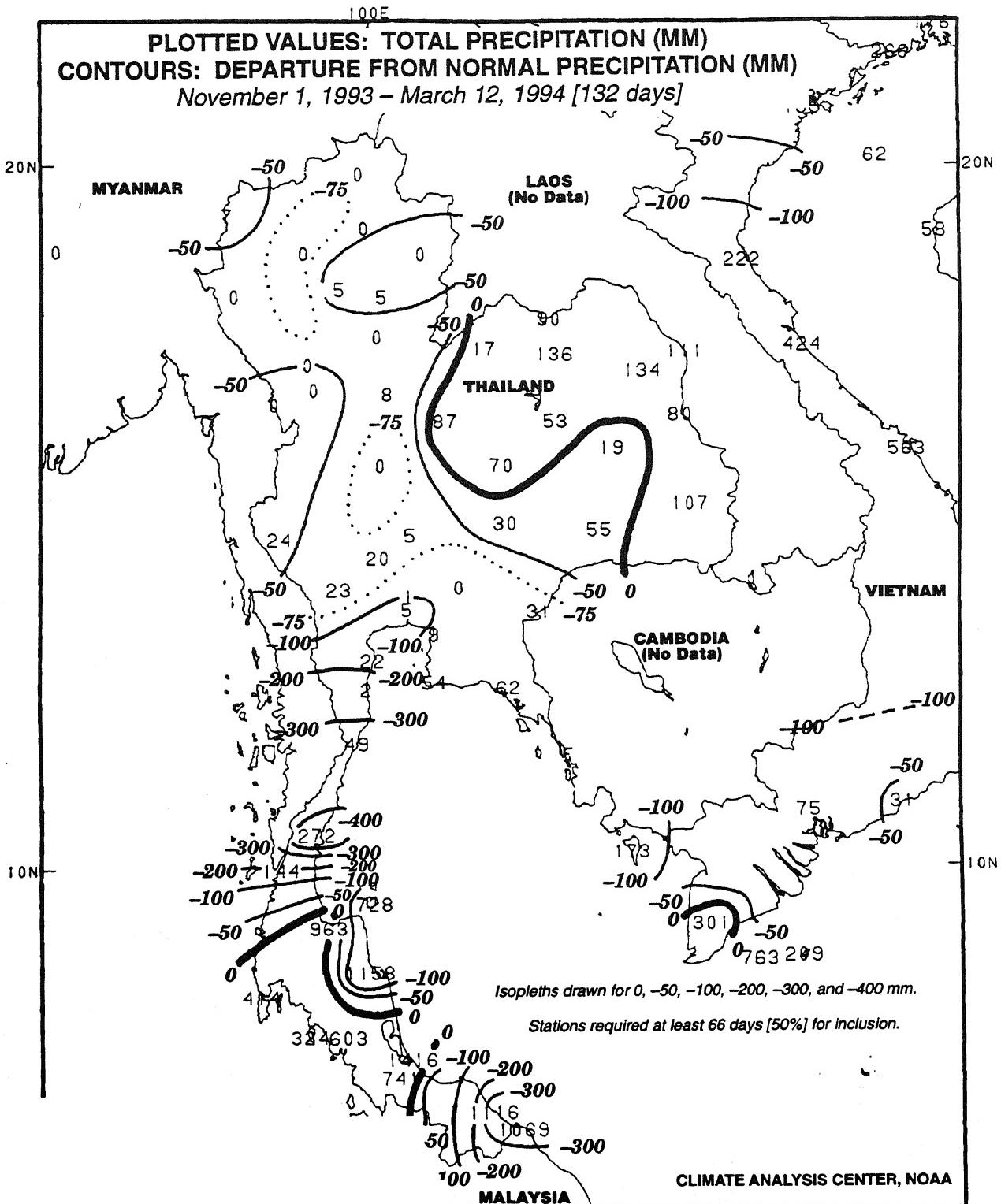
9. Australia:

COOL AND WET WEATHER CONTINUES.

Temperatures averaged as much as 4°C below normal as cool air enveloped much of the country last week [COLD - 3 weeks]. Although most of the western and interior sections of Australia received little or no rain, moderate amounts of 30 to 60 mm soaked eastern sections of the continent, and a few locations in the South received up to 100 mm. Since early February, moisture surpluses of up to 140 mm were reported at many locations [WET - 8 weeks].

EXPLAN

GLOBAL CLIMATE HIGHLIGHTS FEATURE



SOUTHERN AND WESTERN THAILAND AND VIETNAM. The last 4½ months brought very little rainfall to central and western Thailand north of the Isthmus of Kra; however, the colder half of the year typically brings only light to moderate rains to these areas, so accumulated deficits were only in the 30–90 mm range, even at those locations that reported no measurable precipitation throughout the period. Farther west, normals are also relatively low (between 30 and 60 mm), thus the 20–135 mm reported since November 1 (most of which fell since early February) correspond to only small deficits or surpluses. Farther south, normal cool-season rainfall is much larger, and the 50–275 mm measured along the northern Isthmus of Kra was generally 100–410 mm below normal. Conditions were highly variable farther south along the Isthmus, with accumulated rainfall of 325–1415 mm and deviations from normal ranging anywhere from -350 to +315 mm. In addition, most of Vietnam has accumulated moisture deficits of 80–195 mm since November 1 despite several tropical cyclones affecting the country during the last two months of 1993.

UNITED STATES WEEKLY CLIMATE HIGHLIGHTS

FOR THE WEEK OF MARCH 6 - 12, 1994

The latest of this winter's storms pounded the nation from the Texas Panhandle northeastward to New York and New England, again closing schools, delaying flights, disrupting electrical power, and causing numerous traffic accidents. The system developed Tuesday over the southern High Plains and dumped 10 to 20 inches of snow on a swath from northwestern Texas northeastward to southern Missouri. A new 24-hour snowfall record was set at Tulsa, OK when 12 inches buried the airport. On Wednesday, up to a foot of snow fell on the Ohio Valley, causing flight delays in Cincinnati and Columbus, where a jetliner skidded off an icy runway. As the storm moved northeastward, lingering lake-effect snow showers dumped four to six inches of snow on a 100-mile wide band in Ohio from Cincinnati to Cleveland. By Thursday, the storm moved into the Northeast, dropping up to seven inches of snow and/or sleet and freezing rain on some places.

The week began with a strong storm system dumping heavy rain on southern California, engendering more mudslides on the fire-denuded hills near Los Angeles. Flash floods damaged some 50 homes in Mentone, according to press reports. Elsewhere, light precipitation was widely scattered across Great Plains, Mississippi Valley, Great Lakes, and Northeast as a cold front pushed southeastward from the upper Great Lakes to the northern portions of the southern High Plains. South of the front, mild air streamed from the Gulf of Mexico northeastward to the mid-Atlantic. On Monday, precipitation fell from Oklahoma and eastern Kansas to the mid-Atlantic and southern New England as the cold front continued to edge southeastward. On Tuesday, warm weather in the Texas panhandle, with temperatures in the eighties, was replaced by blizzard-like conditions as the aforementioned storm developed along the cold front across the southern Plains, spreading snow northeastward into southern Missouri.

During the middle of the week, the storm system moved eastward and then northeastward, generating heavy rain from the southeastern Plains to the middle and southern Atlantic Coast and dumping heavy snow from northern Texas to the Northeast. On Friday, a large high pressure system slid eastward in the storm's wake, accompanied by fair weather. Farther west, a Pacific Ocean frontal system spread scattered precipitation from the northern and central Pacific

Coast to the Rockies. As the week ended, showers and thunderstorms stretched from the southern Intermountain West to the central Rockies and southern Plains, while the rest of the nation remained dry with seasonable temperatures.

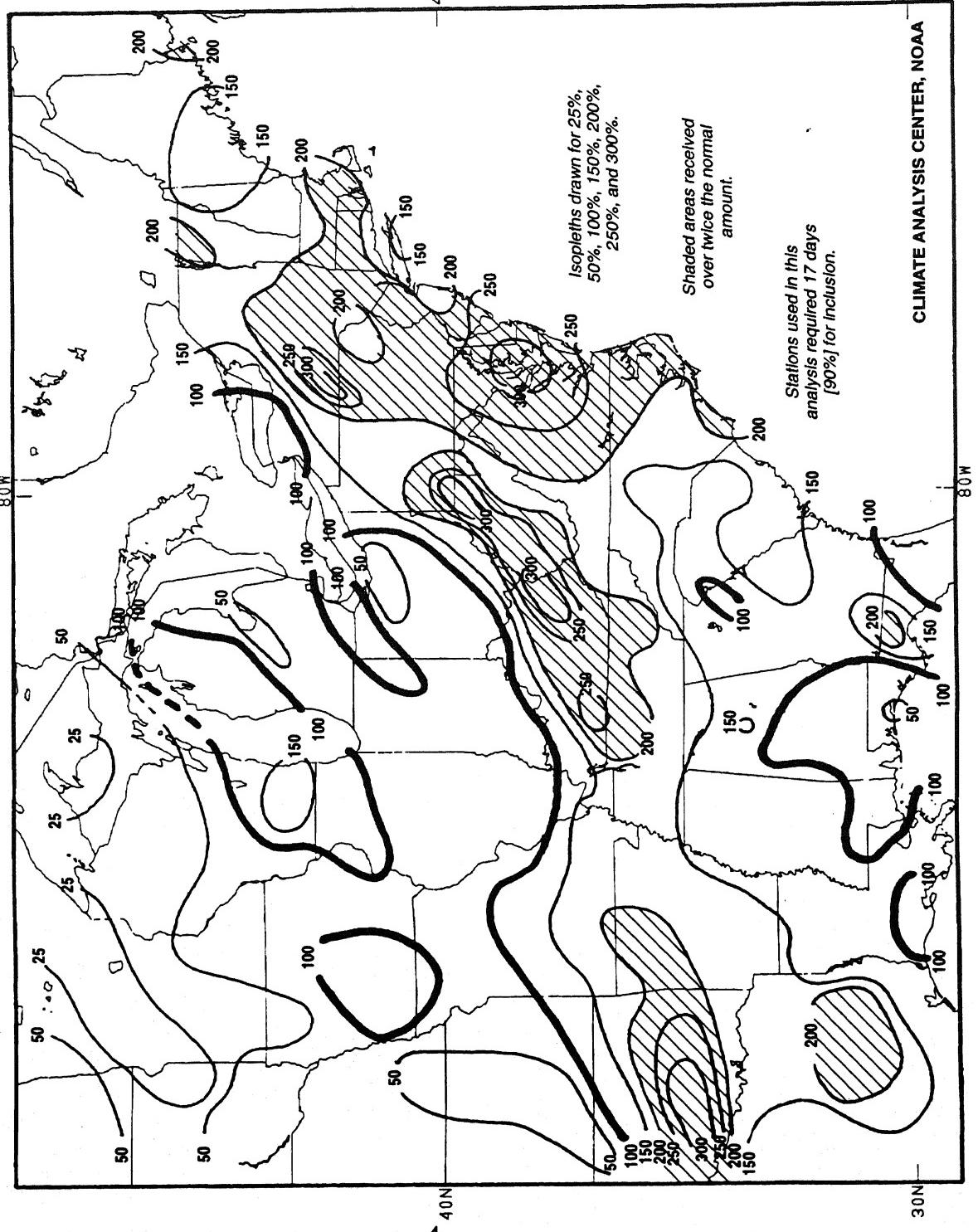
According to the River Forecast Centers, the greatest weekly precipitation (from two to seven inches) fell on the southern Plains, the lower Mississippi, Tennessee, and southern Ohio Valleys, the Appalachians, the northern mid-Atlantic, and southern New England, with the heaviest totals reported in central Tennessee and most of Kentucky. In addition, totals exceeded two inches at scattered locations across the Southeast and in southeastern Alaska, with up to five inches in the southern Panhandle. Light to moderate amounts dampened the rest of the Southeast, the Midwest, portions of the Intermountain West, northern California, western sections of Washington and Oregon, most of Alaska, and Hawaii. Little or no precipitation was reported in the northern and central Plains, the upper Great Lakes, the northern Rockies, and the interior portions of Washington and Oregon.

Warmer than normal conditions dominated the Far West, the northern Rockies and northern High Plains, the Corn Belt, the western Great Lakes, the Southeast, and the mid-Atlantic. Weekly departures of +6°F to +10°F were observed in northern California, southern Nevada, western Wyoming and adjacent sections of Idaho, and parts of Montana. In Alaska, abnormally mild weather prevailed across most of the state with temperatures averaging 3°F above normal. Unusually warm weather was also reported in Hawaii.

Colder than normal conditions were reported in the southern Plains, the Ohio Valley, the eastern Great Lakes, and most of Maine, with temperatures averaging 3°F to 6°F below normal in the Panhandles of Texas and Oklahoma, southeastern Missouri, and most of Pennsylvania and adjacent western New York. Slightly below normal temperatures were also observed in the interiors of Washington and Oregon, in parts of the upper Midwest, and in Maine.

PERCENT OF NORMAL PRECIPITATION

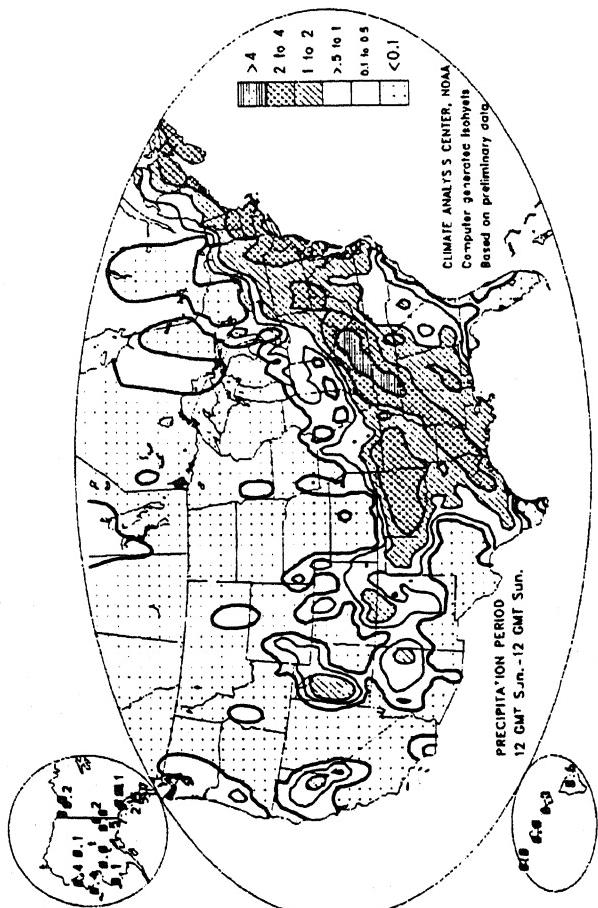
February 20 – March 10, 1994 [19 days]



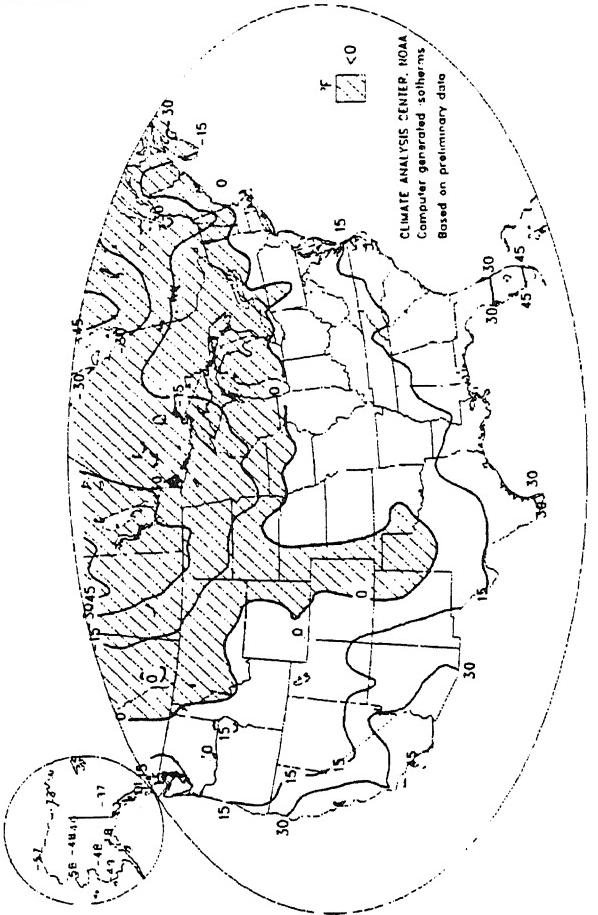
STORMS BRING HEAVY PRECIPITATION TO LARGE SECTIONS OF THE SOUTHERN PLAINS, CENTRAL APPALACHIANS, MID-ATLANTIC, AND NORTH-EAST. Generally above-normal precipitation was observed across much of the South and East since October as numerous systems pounded the Ohio Valley, mid-Atlantic, and Northeast with heavy rains and flooding, sleet, freezing rain, and heavy snow (see the U.S. Seasonal Climate Summary on pp. 7–12 for more details). During the last third of February and the first third of March, three strong storm complexes traversed the region, bringing more heavy rains and/or wintry precipitation to large portions of the eastern half of the United States. Many locations received over twice the normal amount during the 19-day period, with portions of central Oklahoma, eastern Kentucky and southwestern West Virginia, northeastern West Virginia and southwestern Pennsylvania, the central mid-Atlantic, and south-central New York reporting over three times the normal amount. According to reports received from the River Forecast Centers, the heaviest amounts fell in central and southwestern Tennessee, where some locations measured almost 14 inches. In sharp contrast, less than half of normal precipitation fell during the same period on parts of the central and northern Plains and northern Great Lakes, where subnormal precipitation has been the general rule since October.

UNITED STATES WEEKLY CLIMATE CONDITIONS (March 6 – 12, 1994)

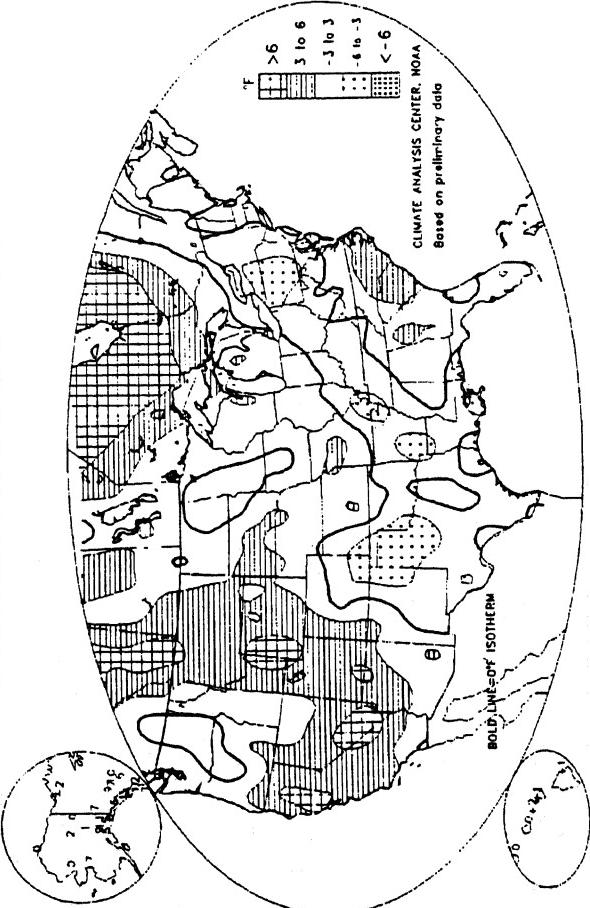
OBSERVED PRECIPITATION (INCHES)



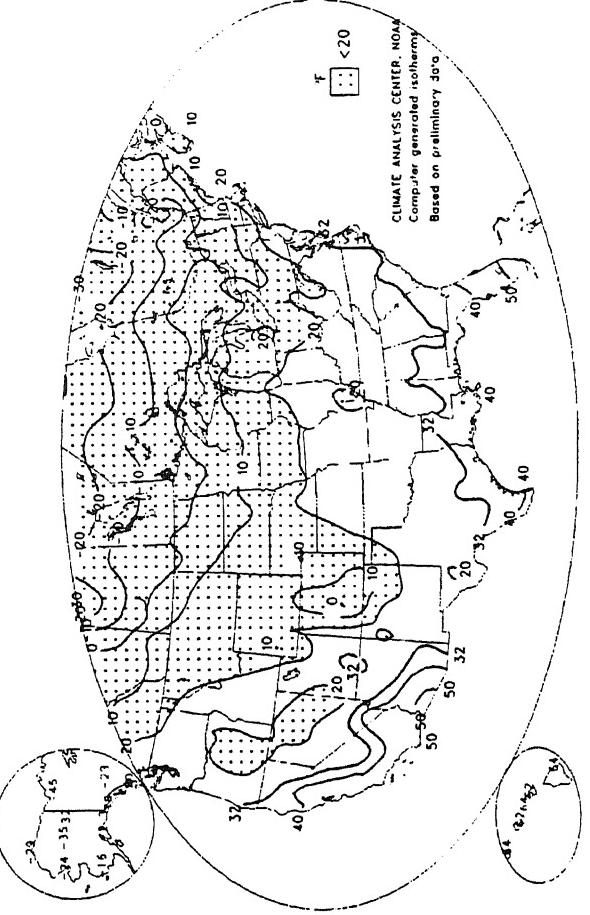
MINIMUM WIND CHILL TEMPERATURE ($^{\circ}\text{F}$)



DEPARTURE OF AVERAGE
TEMPERATURE FROM NORMAL ($^{\circ}\text{F}$)

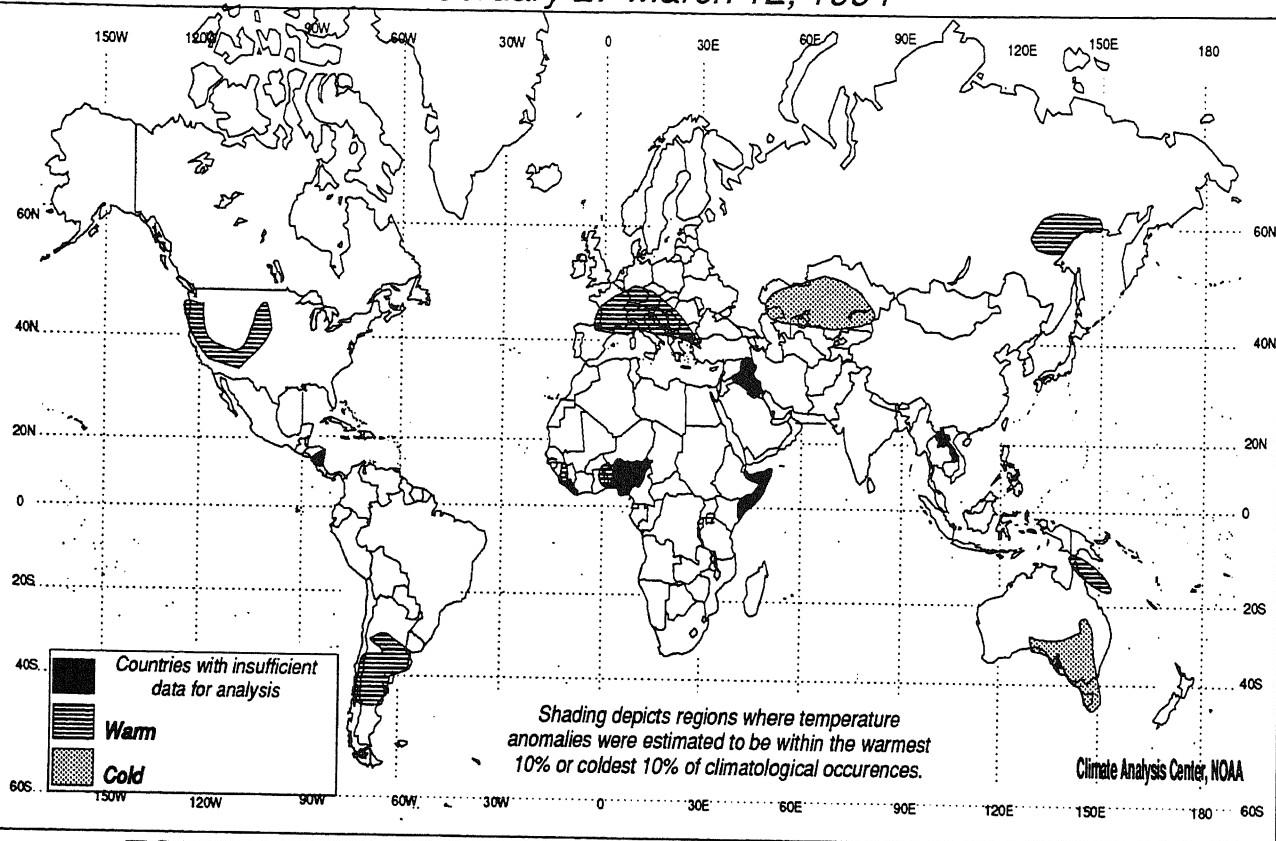


EXTREME MINIMUM TEMPERATURE ($^{\circ}\text{F}$)



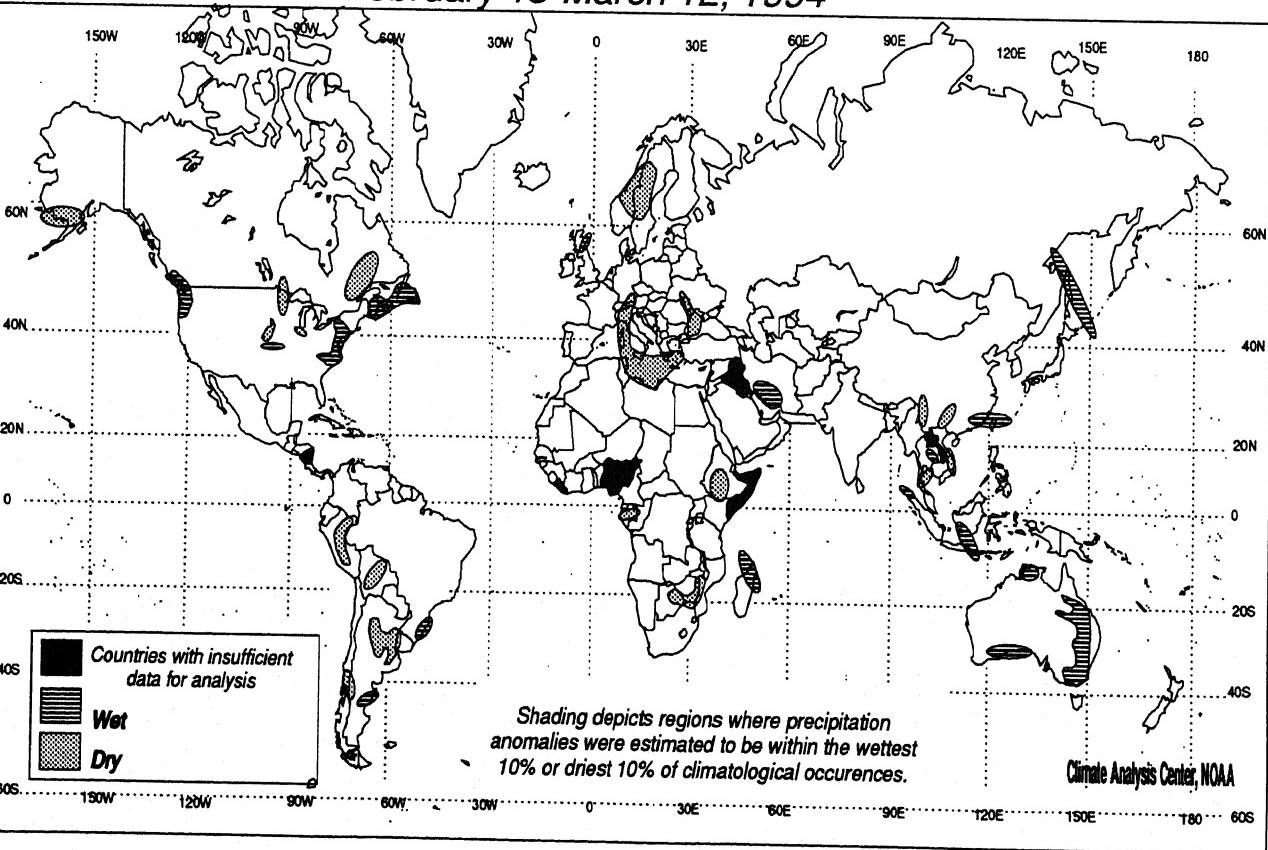
TWO-WEEK GLOBAL TEMPERATURE ANOMALIES

February 27-March 12, 1994



FOUR-WEEK GLOBAL PRECIPITATION ANOMALIES

February 13-March 12, 1994



UNITED STATES SEASONAL CLIMATE SUMMARY

WINTER (DECEMBER – FEBRUARY) 1993 – 1994

December opened with locally heavy rain inundating much of the eastern half of the country while freezing rain glazed parts of the upper and middle Mississippi Valley. Farther west, strong Pacific Ocean storms dumped over nine inches of rain on parts of northern California, and heavy snows blanketed the Cascades and Sierra Nevadas. In addition, winds reached 90 mph at Stead, NV (near Reno) and gusted to 98 mph along the northern Oregon coast. Moderate to heavy snows fell on a swath from the central Rockies to the middle Mississippi Valley, with parts of Utah buried under two feet of heavy, wet snow. By the middle of the month, one storm generated up to four inches of precipitation, heavy surf, coastal flooding, and beach erosion as it moved northeastward through the nation's midsection and off the middle and northern Atlantic Coast while another spread moderate precipitation across much of the central United States from the central Rockies northeastward to the upper Mississippi Valley and southward to the Texas Gulf Coast. Meanwhile, temperatures soared into the sixties in western portions of Oregon and Washington. A shift in the upper-level air flow pattern during the third week of December brought cold air and moderate to heavy snow to much of the Northeast and the higher elevations of the Carolinas while dry and mild conditions prevailed across the West (this pattern generally persisted through mid–February). The month closed with bitterly cold Arctic air covering the East while mild Pacific air enveloped Alaska and the West. The Arctic air blowing across the relatively warm Great Lakes engendered significant lake–effect snow squalls along the shores of Lakes Erie and Ontario, where 20 to 36 inches of snow piled up.

Repeated Arctic air masses invaded the central and eastern states during January. Strong wind, brutally cold air, heavy snow, sleet, and freezing rain delayed millions of commuters, closed schools and airports, created treacherous travel conditions, and disrupted power supplies across much of the northeastern quarter of the nation. Some locations from the Ohio Valley to New England received over three feet of snow during the month while thick accumulations of ice glazed trees and power lines in other areas. Shortly after mid-month, one of the coldest Arctic outbreaks on record swept across the central and eastern United States, bringing all-time record lows to more than a dozen cities in the upper Ohio Valley, lower Great Lakes, central Appalachians, and northern mid-Atlantic. Strong winds generated dangerous wind chills ranging from -25°F in Georgia to -83°F in North Dakota. The record cold combined with the wintry precipitation to cripple much of the Northeast, mid-Atlantic, and Southeast. A state of emergency was declared in New Jersey, Pennsylvania, and Washington, DC, with controlled localized power outages instituted by several power companies in an effort to keep up with tremendous heating demand. At least 130 lives were claimed by the cold spell, according to press reports. In stark contrast, unseasonably mild weather prevailed across the West, where over three dozen daily record highs were set. During the final week of the month, cold air remained trapped near the ground along and east of the Appalachians while milder air swept into the upper levels of the atmosphere, allowing rain to fall which froze on contact with cold surfaces near the ground, resulting in a thick glaze of ice that forced airports to close and made driving nearly impossible at times from the central Carolinas northeastward into New York. As the month ended and somewhat milder conditions prevailed, heavy rains accompanied by rapid snow and ice melt caused major ice-jam flooding along some rivers from the Midwest to southern New England. In contrast, unseasonably dry weather dominated the Far West.

As was the case in January, a broad upper-level trough over the central and eastern United States brought abnormally cold conditions to central and eastern sections of the nation through the first half of February. In addition, major winter storms traversed the nation during the first full week of the month, dumping 10 to 27 inches of snow on much of the Northeast and Midwest while more sleet and freezing rain pelted the Plains, Ohio Valley, central Appalachians, and mid-Atlantic. The storms forced the closure of airports, highways, railroads, schools, businesses, and government offices, and ice-coated trees and power lines knocked out electrical service to hundreds of thousands of customers from the southern Plains to the mid-Atlantic. Farther west, a massive Pacific Ocean storm inundated much of California, triggering numerous rock and mudslides (particularly on fire-debarked hills) and causing accidents in southwestern parts of the state. The abundant precipitation, however, somewhat alleviated the exceptionally dry conditions that had dominated the West since November 1993. Unseasonably warm conditions provided the central and eastern states with a brief but welcome respite from the

harsh winter weather during the third week of the month before another massive storm brought severe weather to the southern Plains and more ice and heavy snow to the central Plains, upper Mississippi Valley, and Northeast.

According to the River Forecast Centers, the greatest seasonal precipitation totals were measured in the Pacific Northwest (up to 42 inches) and across the Southeast (up to 38 inches) and the mid-Atlantic (page 8). Amounts exceeding a foot were observed in the Far West from central California northward to Canada and across much of the deep South, Appalachians, and mid-Atlantic. Heavier than normal precipitation (up to 37 inches) also fell on the west-central and south-central portions of Alaska, and 52 inches of rain drenched Hilo, Hawaii. Based on preliminary calculations from the National Climatic Data Center (NCDC), only two of the nine regions and 15 of the 48 contiguous states reported above–median amounts, with Virginia experiencing the 9th wettest Winter since records began in 1895–96 (page 9). This has been an exceptionally snowy season throughout the Northeast from November through early March. Boston, MA established a new snowfall record for the cold season (October – April) with nearly 90 inches, and New York City endured its snowiest cold season in sixteen years. In addition, the persistently colder than normal conditions allowed the ground to remain snow and/or ice covered for prolonged periods from the mid-Atlantic northward as Harrisburg, PA established a new record for consecutive days with at least one inch of snow cover (over 70 days).

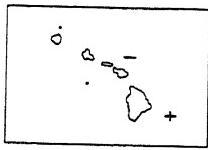
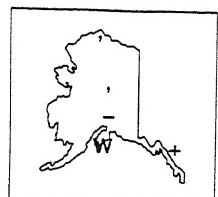
In sharp contrast, subnormal precipitation was reported across the southern Corn Belt and the Intermountain West, and totals were less than half of normal in the desert Southwest and Great Basin (page 8). Much of interior Alaska and most of Hawaii also received subnormal winter precipitation. Seven of the nine NCDC regions reported submedian precipitation amounts, with the Southwest observing its 3rd driest winter in 99 years (page 9). In addition, two other regions, the Northwest and the West North Central, experienced the 7th driest such season since records began in 1895–96. Of the 48 contiguous states, 33 were drier than the 1895–96 through 1992–93 average, with Nevada and New Mexico both reporting the 2nd driest winter in 99 years of record. In addition, eight more western states (AZ, CO, ID, MT, OR, UT, WA, and WY) had seasonal precipitation totals among the ten driest in the historical distribution. With abnormally dry weather dominating the West, the nation as a whole endured the 6th driest winter on record despite the storminess in the East. During the past six months (September 1993 – March 1994), the Northwest, West, and Southwest regions reported the 2nd, 8th, and 16th driest such period in 99 years of record (page 12).

Temperatures averaged 2°F to 8°F below normal across the north-central and northeastern states, with the greatest negative departures reported in the Dakotas and Minnesota (page 10). Near to slightly below normal readings prevailed across Hawaii. According to NCDC, two-thirds of the regions experienced submedian winter temperatures, with the Northeast enduring the 10th coldest such season since records began in 1895–96 (page 11). Seasonal mean temperatures were below median values in 35 of the 48 states, with Maine and New York both reporting the 8th coldest winter on record and three more states (DE, MA, and MI) the 9th coldest such season in 99 years. With abnormally cold weather dominating the country east of the Rockies, the nation as a whole experienced the 39th coldest such season on record. Submedian six-month (September 1993 – February 1994) average temperatures were reported in seven of the nine NCDC regions, with the Northeast and the East North Central experiencing the 7th and 8th coldest such period, respectively, since records began in 1895–96 (page 12). In addition, submedian temperatures prevailed during the twelve months ending February 1994 across most of the nation, with the East North Central having the 6th coldest such period in the 99-year historical distribution.

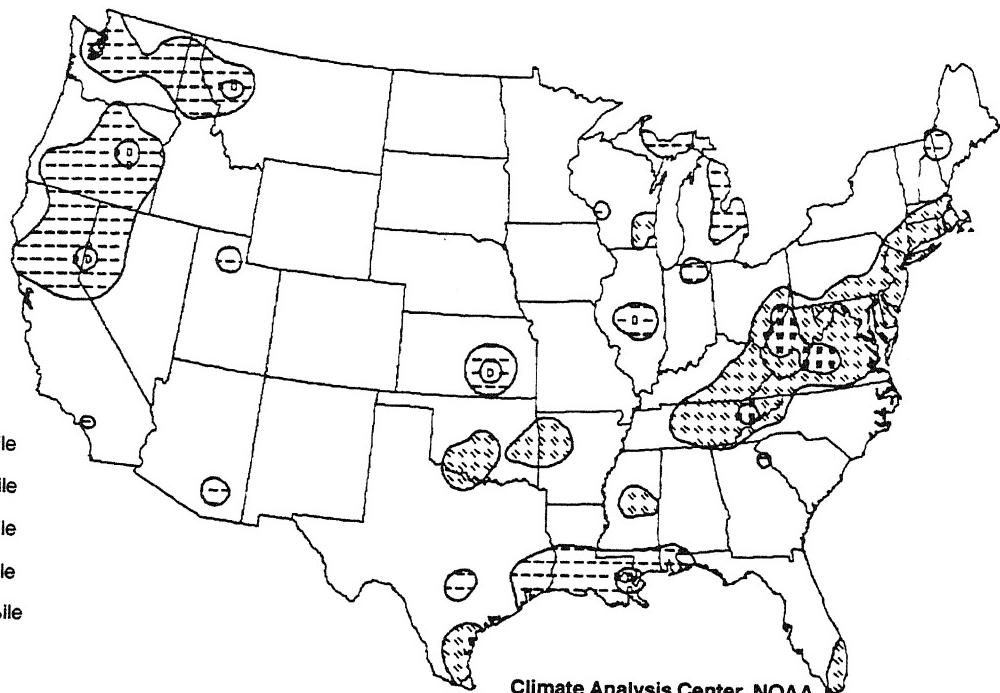
Unusually mild weather prevailed across most of the West and the South, with the largest positive departures ($+6^{\circ}\text{F}$ to $+8^{\circ}\text{F}$) reported in Wyoming (page 10). Temperatures averaged 2°F to 4°F above normal in Alaska. Three of the nine NCDC regions experienced above–median winter temperatures, with the Northwest ranking 15th warmest in 99 years of record (page 11). Of the 48 contiguous states, only 13 reported above–median seasonal temperatures, with Idaho reporting the 10th warmest winter since 1895–96.

PRECIPITATION PERCENTILES

WINTER (DECEMBER – FEBRUARY) 1993 – 1994



- D less than 10%ile
- 10%ile to 30%ile
- . 30%ile to 70%ile
- + 70%ile to 90%ile
- W more than 90%ile

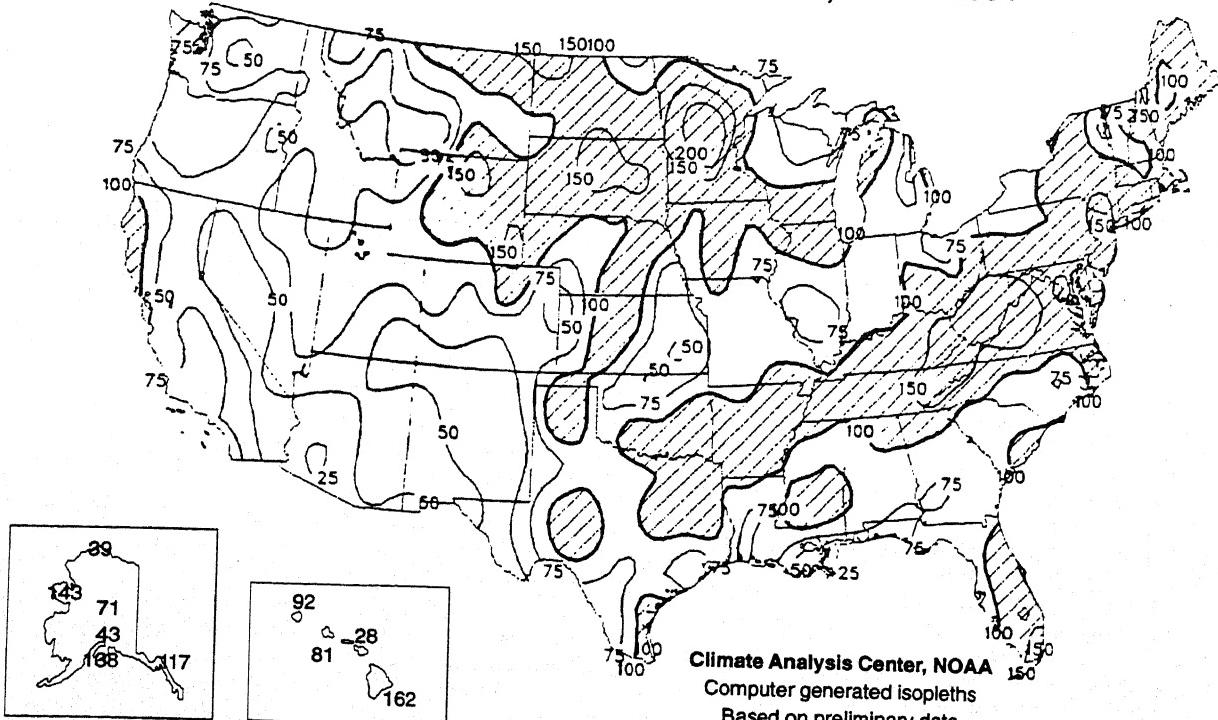


Climate Analysis Center, NOAA

WINTER (DECEMBER – FEBRUARY) 1993 – 1994 PRECIPITATION PERCENTILES, as computed by the Climate Analysis Center. A wet Winter (>70%ile) prevailed across parts of Oklahoma and western Arkansas, the central Appalachians, the mid-Atlantic, and southern New England. Seasonal totals were among the wettest 10% of the historical (1961 – 1990) distribution in portions of Virginia, Tennessee, and West Virginia. In contrast, climatologically significant dryness (<30%ile) was observed in parts of the Far West, south-central Kansas, Michigan, and the central Gulf Coast.

PERCENT OF NORMAL PRECIPITATION

WINTER (DECEMBER – FEBRUARY) 1993 – 1994



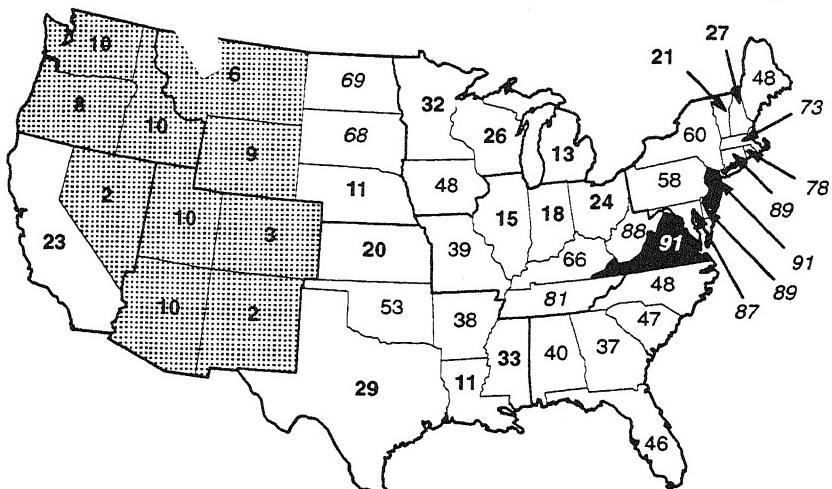
Climate Analysis Center, NOAA

Computer generated isopleths

Based on preliminary data

WINTER (DECEMBER – FEBRUARY) 1993 – 1994 PERCENT OF NORMAL PRECIPITATION. Hatched areas received above normal precipitation. Above normal precipitation prevailed across the northern and central Plains, the Ozarks, the Appalachians, the mid-Atlantic, and New England. Subnormal seasonal totals covered most of the West and portions of the South, Midwest, and Great Lakes.

THREE-MONTH HISTORICAL PRECIPITATION RANKINGS BY STATE WINTER (DECEMBER – FEBRUARY) 1993 – 1994



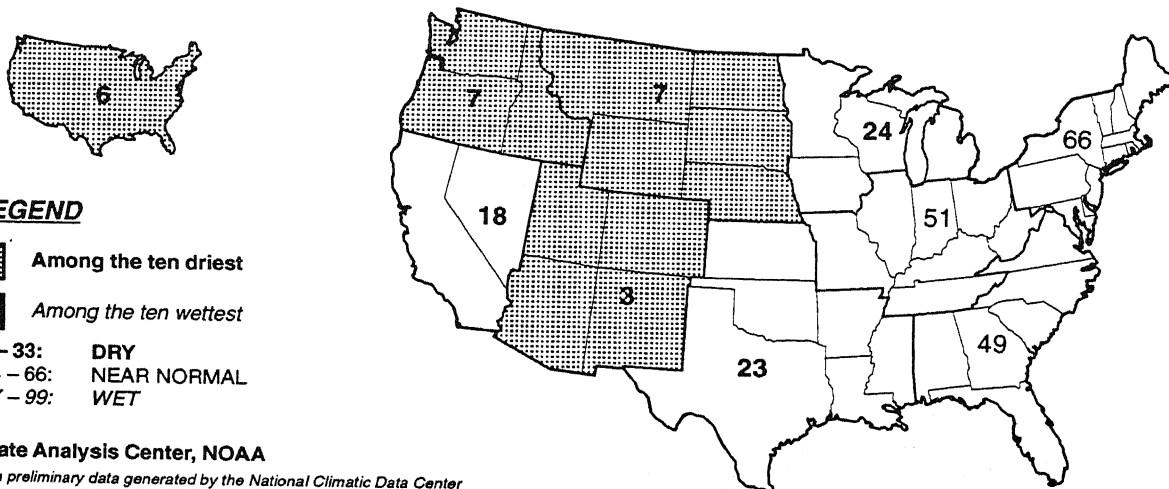
LEGEND

	Among the ten driest
	Among the ten wettest
1–33:	DRY
34–66:	NEAR NORMAL
67–99:	WET

Climate Analysis Center, NOAA

This chart depicts the ranking of the specific parameter, as measured during the period indicated, with respect to all other such periods on record since 1895.

THREE-MONTH HISTORICAL PRECIPITATION RANKINGS BY REGION AND NATION WINTER (DECEMBER – FEBRUARY) 1993 – 1994



LEGEND

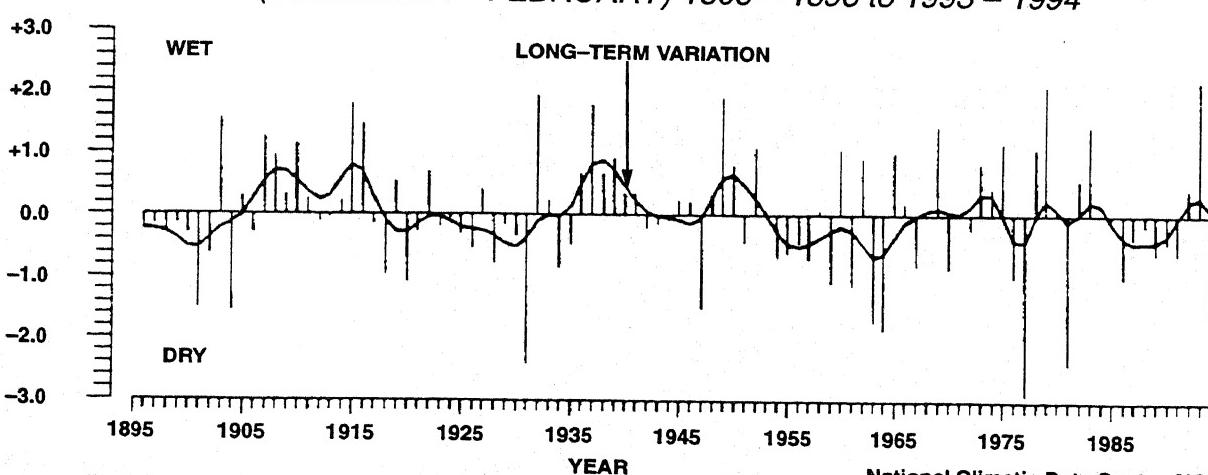
	Among the ten driest
	Among the ten wettest
1–33:	DRY
34–66:	NEAR NORMAL
67–99:	WET

Climate Analysis Center, NOAA

Based on preliminary data generated by the National Climatic Data Center

This chart depicts the ranking of the specific parameter, as measured during the period indicated, with respect to all other such periods on record since 1895.

THREE-MONTH U. S. NATIONAL NORMALIZED PRECIPITATION INDEX WINTER (DECEMBER – FEBRUARY) 1895 – 1896 to 1993 – 1994

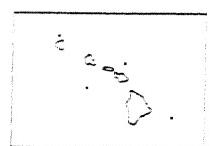
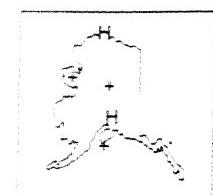


National Climatic Data Center, NOAA

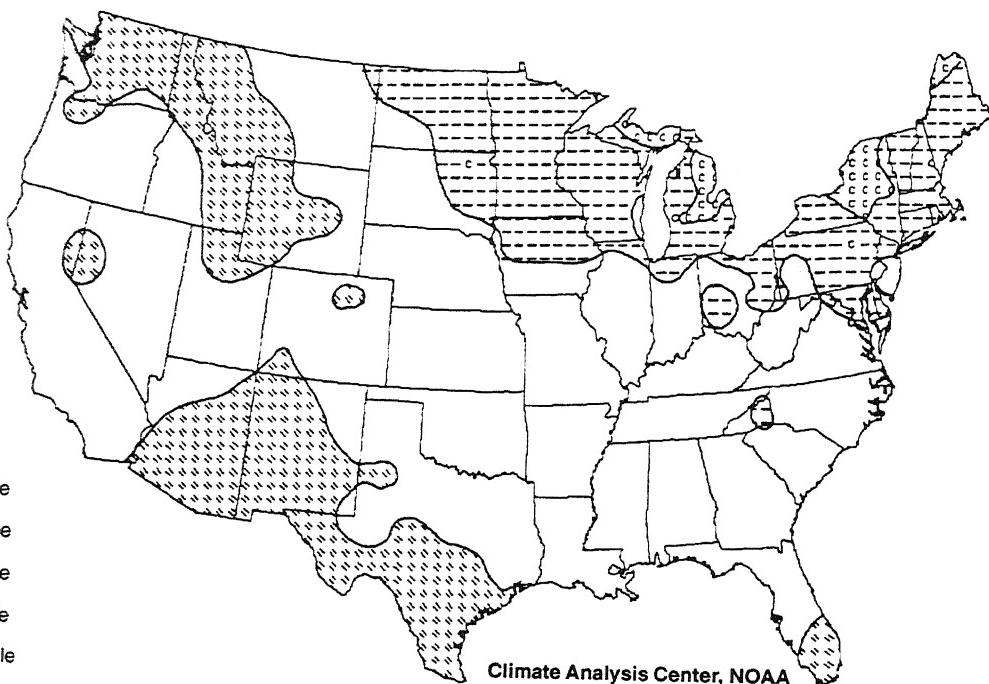
NATIONAL MEAN WINTER (DECEMBER – FEBRUARY) PRECIPITATION INDEX, as computed by the National Climatic Data Center. Winter (December – February) 1993 – 1994 was the 6th driest such season on record. This index takes local normals into account so that regions with large precipitation amounts do not dominate the index value.

TEMPERATURE PERCENTILES

WINTER (DECEMBER – FEBRUARY) 1993 – 1994



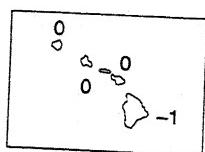
C	less than 10%ile
-	10%ile to 30%ile
.	30%ile to 70%ile
+	70%ile to 90%ile
H	more than 90%ile



WINTER (DECEMBER – FEBRUARY) 1993 – 1994 TEMPERATURE PERCENTILES, as computed by the Climate Analysis Center. Unusually cold conditions (<30%ile) covered the north-central states and the Northeast, with seasonal mean temperatures among the lowest 10% of the 1961 – 1990 historical distribution in parts of Michigan, New York, and Maine. Abnormally warm weather dominated the Pacific Northwest, the northern Rockies, the desert Southwest, the southern Plains, and southern Florida.

DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)

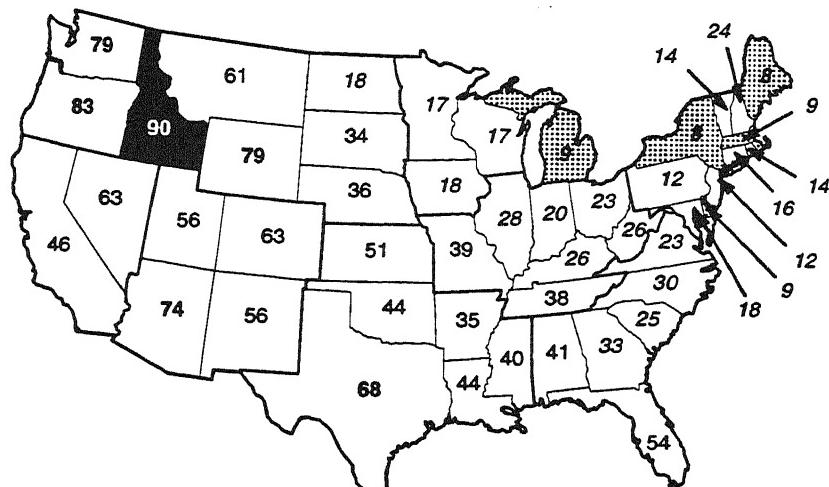
WINTER (DECEMBER – FEBRUARY) 1993 – 1994



Climate Analysis Center, NOAA
Computer generated isopleths
Based on preliminary data

WINTER (DECEMBER – FEBRUARY) 1993 – 1994 DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F). Shaded areas experienced above normal temperatures. Temperatures averaged 2°F to 8°F below normal across the northeastern and north-central states, with the largest negative departures in Minnesota and the Dakotas. In contrast, seasonal mean temperatures were at least 2°F above normal across most of the West, scattered parts of the southern Plains, and extreme southern Florida.

THREE-MONTH HISTORICAL TEMPERATURE RANKINGS BY STATE WINTER (DECEMBER – FEBRUARY) 1993 – 1994



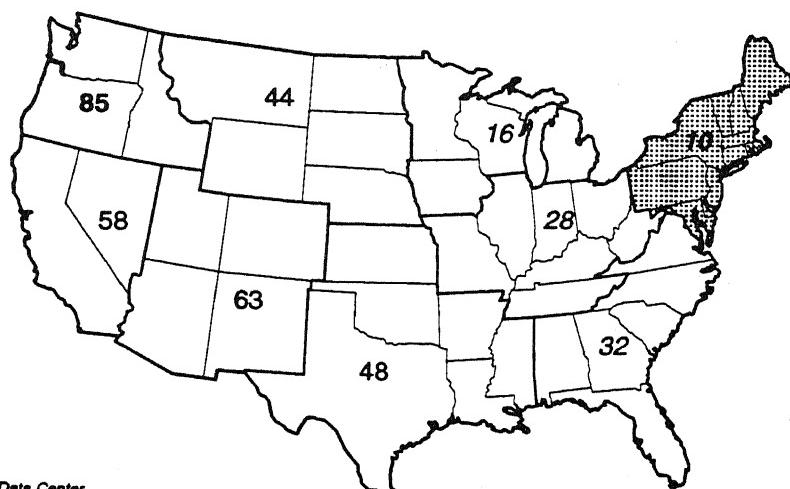
LEGEND

- [Light gray square] Among the ten coldest
- [Dark gray square] Among the ten warmest
- 1 – 33: COLD
- 34 – 66: NEAR NORMAL
- 67 – 99: WARM

Climate Analysis Center, NOAA

This chart depicts the ranking of the specific parameter, as measured during the period indicated, with respect to all other such periods on record since 1895.

THREE-MONTH HISTORICAL TEMPERATURE RANKINGS BY REGION AND NATION WINTER (DECEMBER – FEBRUARY) 1993 – 1994



LEGEND

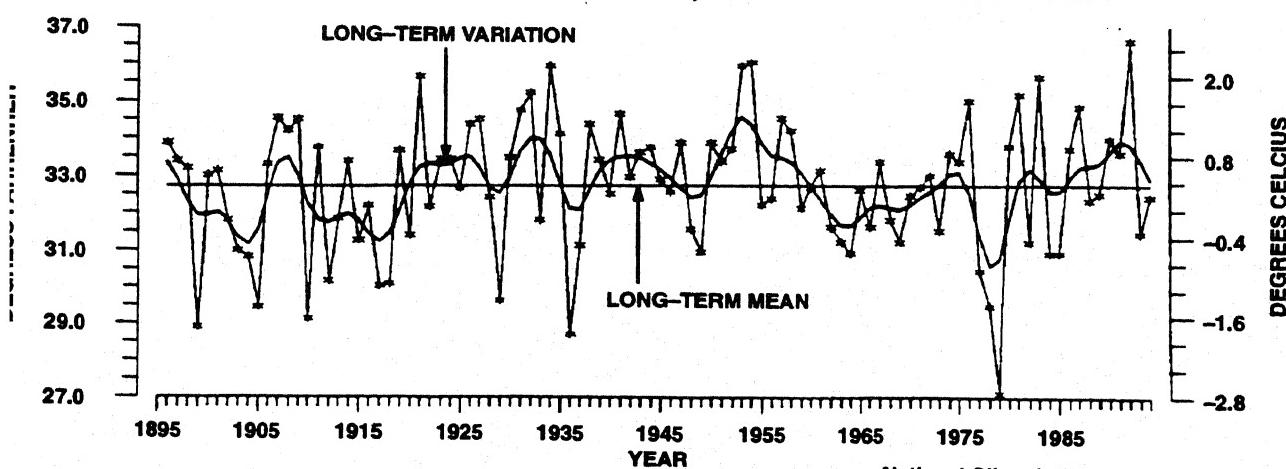
- [Light gray square] Among the ten coldest
- [Dark gray square] Among the ten warmest
- 1 – 33: COLD
- 34 – 66: NEAR NORMAL
- 67 – 99: WARM

Climate Analysis Center, NOAA

Based on preliminary data generated by the National Climatic Data Center

This chart depicts the ranking of the specific parameter, as measured during the period indicated, with respect to all other such periods on record since 1895.

THREE-MONTH U. S. NATIONAL TEMPERATURE WINTER (DECEMBER – FEBRUARY) 1895 – 1896 to 1993 – 1994



National Climatic Data Center, NOAA

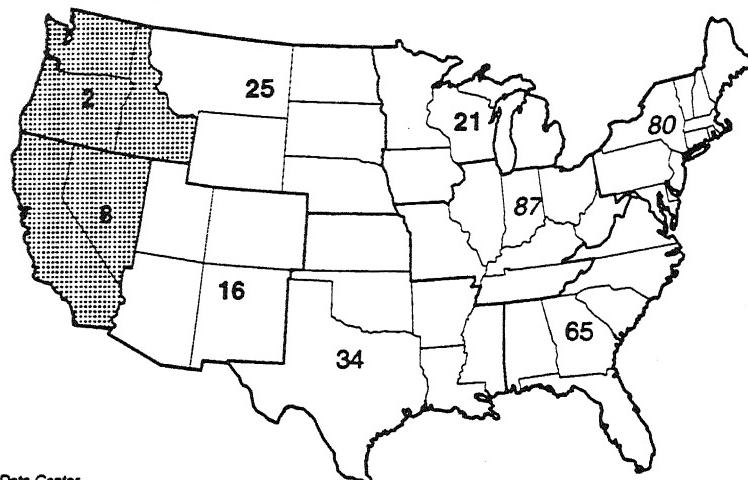
NATIONALLY AVERAGED WINTER (DECEMBER – FEBRUARY) TEMPERATURES, as computed by the National Climatic Data Center. Winter (December – February) 1993 – 1994 was the second successive such season with submedian temperatures and the 39th coldest on record (since 1895 – 1896).

SIX-MONTH HISTORICAL PRECIPITATION RANKINGS BY REGION AND NATION SEPTEMBER 1993 – FEBRUARY 1994



LEGEND

- [Hatched square] Among the ten driest
- [Solid black square] Among the ten wettest
- 1 – 33: DRY
- 34 – 66: NEAR NORMAL
- 67 – 99: WET



Climate Analysis Center, NOAA

Based on preliminary data generated by the National Climatic Data Center

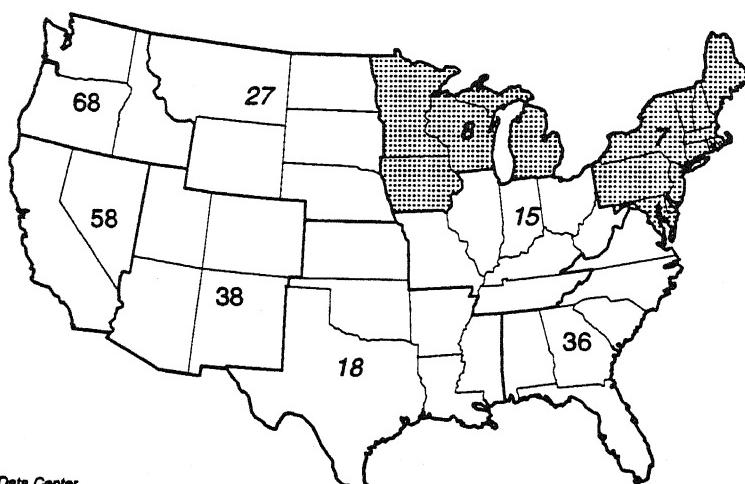
This chart depicts the ranking of the specific parameter, as measured during the period indicated, with respect to all other such periods on record since 1895.

SIX-MONTH HISTORICAL TEMPERATURE RANKINGS BY REGION AND NATION SEPTEMBER 1993 – FEBRUARY 1994



LEGEND

- [Hatched square] Among the ten coldest
- [Solid black square] Among the ten warmest
- 1 – 33: COLD
- 34 – 66: NEAR NORMAL
- 67 – 99: WARM



Climate Analysis Center, NOAA

Based on preliminary data generated by the National Climatic Data Center

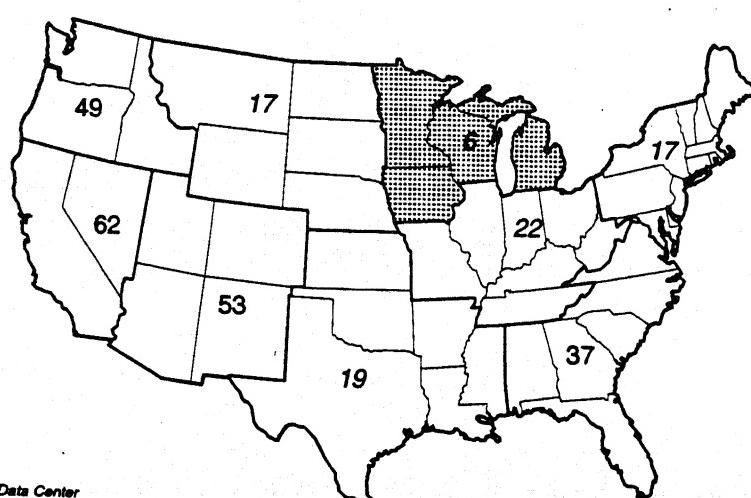
This chart depicts the ranking of the specific parameter, as measured during the period indicated, with respect to all other such periods on record since 1895.

TWELVE-MONTH HISTORICAL TEMPERATURE RANKINGS BY REGION AND NATION MARCH 1993 – FEBRUARY 1994



LEGEND

- [Hatched square] Among the ten coldest
- [Solid black square] Among the ten warmest
- 1 – 33: COLD
- 34 – 66: NEAR NORMAL
- 67 – 99: WARM



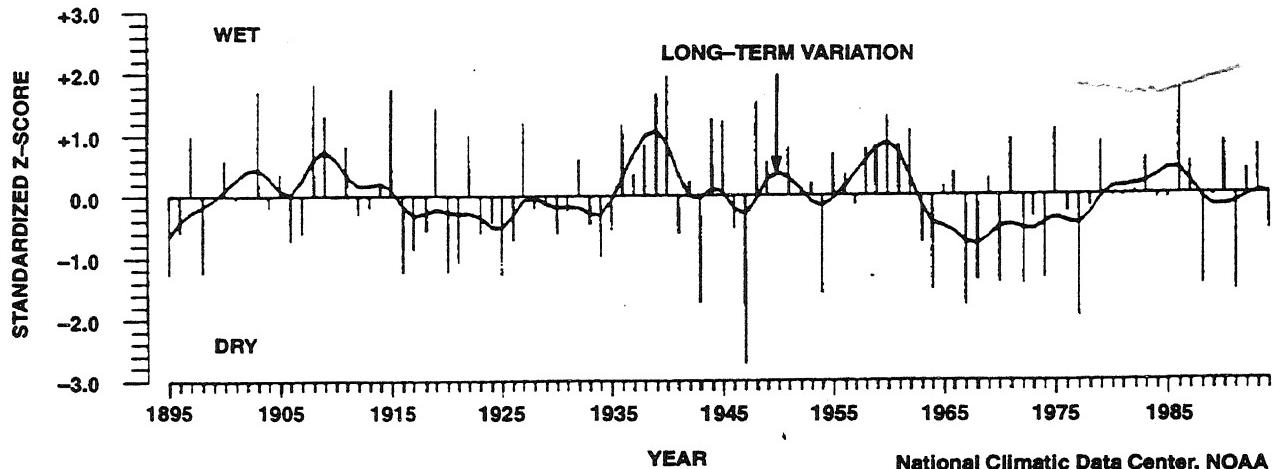
Climate Analysis Center, NOAA

Based on preliminary data generated by the National Climatic Data Center

This chart depicts the ranking of the specific parameter, as measured during the period indicated, with respect to all other such periods on record since 1895.

FEBRUARY U. S. NATIONAL NORMALIZED PRECIPITATION INDEX

FEBRUARY 1895 – 1994

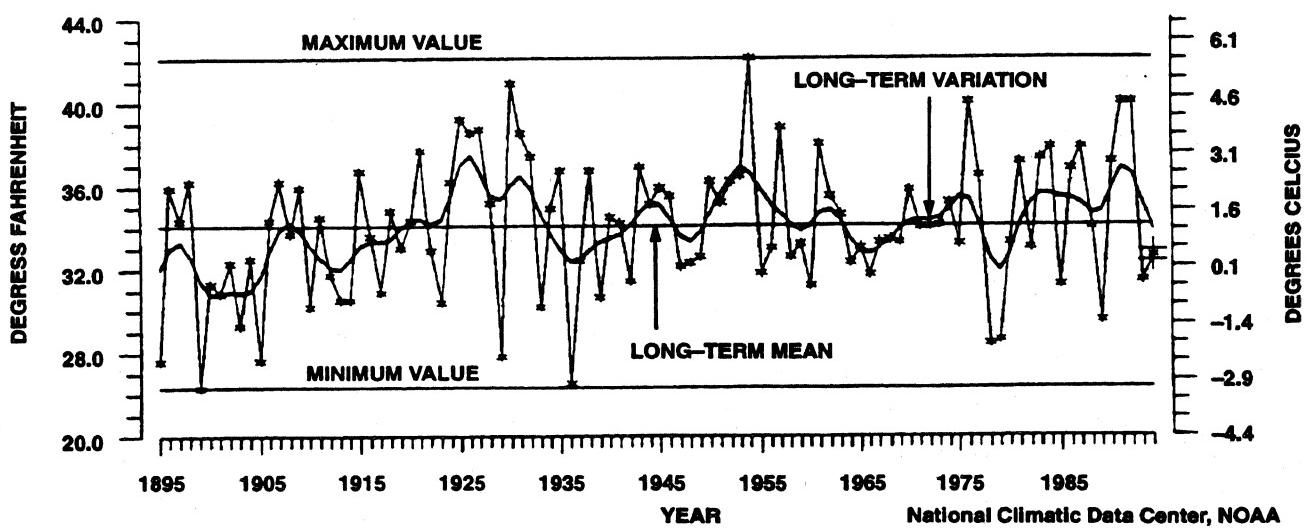


NATIONAL FEBRUARY PRECIPITATION INDEX, as computed by the National Climatic Data Center. February 1994 was the 29th driest such month since records began in 1895. This index takes local normals into account so that regions with large precipitation amounts do not dominate the index value.

NOTICE: These February national average temperature and precipitation index time graphs were not available for last week's February Climate Summary. Furthermore, last week's Weekly Climate Bulletin #94/10 used a really averaged precipitation rank of 34 for the nation as a whole. The rank of the nationally standardized precipitation yields a value of 29, and takes local normals into account so that regions with large precipitation amounts do not dominate the index value (see time series above).

FEBRUARY U. S. NATIONAL TEMPERATURE

FEBRUARY 1895 – 1994



NATIONALLY AVERAGED FEBRUARY TEMPERATURES, as computed by the National Climatic Data Center. February 1994 was the second consecutive such month with submedian monthly temperatures and the 32nd coolest February in the last 100 years.